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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Peter Ka-Fai Chow
Serial No.: 09/816,706
Filed: March 23, 2001
Group Art Unit: 2665
Before the Examiner: Daniel J. Ryman
Title: MECHANISM TO STRIP LARQ HEADER AND
REGENERATE FCS TO SUPPORT SLEEP MODE
WAKE UP

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August 25, 2004

REPLY BRIEF


Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Reply Brief is being submitted in response to the Examiner's Answer dated July 23, 2004 (Paper No. 12), with a two-month statutory period for response set to expire on September 23, 2004.

CERTIFICATION UNDER 37 C.F.R. §1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 25, 2004.



Signature

Serena Beller

(Printed name of person certifying)

I. RESPONSE TO EXAMINER'S ARGUMENTS

- A. Response to Examiner's statement that the status of claims in Appellant's Appeal Brief is incorrect, as discussed on page 2 of Paper No. 12.

The Examiner asserts that claims 1 and 3-11 are pending in the Application and that claim 2 is objected to as being dependent upon a rejected base claim. Paper No. 12, page 2. Appellant understands that claim 2 is now objected to after the filing of Appellant's Appeal Brief. Paper No. 12, page 13. However, upon review of the file, Appellant respectfully asserts that claims 1-12 are pending. Hence, the status of the claims as stated in Appellant's Appeal Brief is correct.

- B. Response to Examiner's statement that Appellant's after-final amendment had not been entered, as discussed on page 3 of Paper No. 12.

The Examiner states that Appellant's after-final amendment had not been entered. Paper No. 12, page 3. Appellant would like to note that Appellant did not file an after-final amendment.

- C. Response to Examiner's argument, as discussed on page 8 of Paper No. 12, that the Examiner did present objective evidence for combining Hinchey and Mallory.

The Examiner asserts that the Examiner did present objective evidence for combining Hinchey and Mallory. Paper No. 12, page 8. In particular, the Examiner asserts that column 4, lines 16-38 and column 6, lines 9-20 of Mallory is evidence for combining Hinchey and Mallory. Paper No. 12, page 8. Appellant respectfully traverses the assertion that the cited passages of Mallory are support for combining Hinchey and Mallory. Instead, these passages are a motivation for Mallory to solve its problem. The Examiner counters by asserting that the Appellant is merely arguing that the Examiner cannot find the motivation to combine Hinchey and Mallory from the reference Mallory. Appellant is not asserting that the motivation to combine Hinchey and Mallory cannot be found in Mallory. Instead, Appellant is asserting that the cited passages in Mallory do not state a motivation to combine Hinchey with Mallory. Column 4, lines 16-38 of Mallory

teach embodiments for implementing the Limited Automatic Repeat reQuest (LARQ) protocol. Further, column 6, lines 9-20 of Mallory teach a structure of a LARQ data frame which is a modified Ethernet frame and comprises destination and source address fields, a LARQ header field, a type/length field, a payload field and possibly an FCS field. There is no language in these cited passages of Mallory that teaches a motivation for modifying Hinchey, which teaches a token ring network packet being transmitted over an Ethernet network by removing the header information from the Token Ring packet and associating a second header with the information field of the Token Ring packet (Abstract of Hinchey), to detect a limited automatic repeat request (LARQ) header in a frame and strip the LARQ header and a frame check sequence in the frame (Examiner admits that Hinchey does not teach this limitation). Instead, the cited passages teach a method and apparatus to reduce the effective frame loss rates and delays to the level of standard Ethernet frame loss rates and delays. This corresponds to the problem to be solved in Mallory as outlined in column 2, lines 51-59 of Mallory. Therefore, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 1, 3 and 5-8 since the Examiner has not presented objective evidence for combining Hinchey with Mallory. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

- D. Response to Examiner's argument, as discussed on pages 8-9 of Paper No. 12, that the Examiner has presented motivation to combine Hinchey and Mallory to perform the steps of claims 1, 3 and 5-8 in order to convert a LARQ Ethernet frame into a conventional Ethernet frame.

The Examiner cites column 1, line 66-column 2, line 21 and column 5, lines 1-28 of Hinchey to indicate that Hinchey teaches preparing a Token Ring packet for transmission over the Ethernet. The Examiner then cites column 4, lines 17-38; column 5, lines 18-23; and column 6, lines 11-15 and 53-56 of Mallory to indicate that Mallory teaches using the LARQ protocol in an Ethernet network and that LARQ headers may contain a FCS field. The Examiner then concludes that it would be obvious to combine Hinchey and Mallory to perform the steps of claims 1, 3 and 5-8 in order to convert a LARQ Ethernet frame into a conventional Ethernet frame. Paper No. 12, page 9.

Appellant respectfully asserts that there is no language in claims 1, 3 and 5-8 that states converting a LARQ Ethernet frame into a conventional Ethernet frame. Further, there is no language in Hinchey that would suggest performing such a conversion. Instead, Hinchey teaches preparing a first network packet, e.g., Token Ring, to be transmitted over a second network, e.g., Ethernet. Abstract of Hinchey. Converting a LARQ Ethernet frame into a conventional Ethernet frame, which are both Ethernet packets, is not converting a frame from one network type packet into another network type packet, as taught in Hinchey. Instead, the Examiner is suggesting the combination to convert the same network type packet, e.g., Ethernet packet, from having a LARQ header to not having a LARQ header. This is contrary to the teachings of Hinchey. Hence, Appellant respectfully asserts that the Examiner has not provided objective evidence for combining Hinchey with Mallory and consequently the Examiner has not provided a *prima facie* case of obviousness for rejecting claims 1, 3 and 5-8. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

- E. Response to Examiner's argument, as discussed on pages 9-10 of Paper No. 12, that the principle of operation of Hinchey would not change by combining Hinchey with Mallory.

The Examiner asserts that by combining Hinchey with Mallory that the operation of Hinchey would not be changed. Paper No. 12, pages 9-10. The Examiner asserts that by combining Hinchey with Mallory that Hinchey would be modified to prepare a LARQ Ethernet frame to be transmitted over the Ethernet and converting the LARQ Ethernet frame to be a conventional Ethernet frame by removing the LARQ header. Paper No. 12, page 10. Appellant respectfully asserts that by modifying Hinchey in such a way that the principle of operation in Hinchey would change, subsequently rendering the operation of Hinchey to perform its purpose unsatisfactorily. As stated above, Hinchey teaches preparing a first network packet, e.g., Token Ring, to be transmitted over a second network, e.g., Ethernet. Converting a LARQ Ethernet frame into a conventional Ethernet frame is not converting a frame from one network type packet into another network type packet. They are both Ethernet packets. Hence, Hinchey would no longer be able to

transmit packets from one type of network over another type of network. Appellant would further like to note that Hinchey specifically teaches preparing a Token Ring network packet for transmission over an Ethernet network. In fact, the background of Hinchey specifically suggests a need to prepare a Token Ring network packet for transmission over an Ethernet network. Column 1, lines 48-64. There is no language in Hinchey to suggest preparing a network packet other than a Token Ring network packet for transmission over a different network other than an Ethernet network. For these reasons, by combining Hinchey with Mallory, the principle of operation of Hinchey would change, subsequently rendering the operation of Hinchey to perform its purpose unsatisfactorily. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1, 3 and 5-8. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

- F. Response to Examiner's argument, as discussed on pages 10-11 of Paper No. 12, that Hinchey and Mallory teach "a first logic block for detecting a LARQ header in a frame; a second logic block for stripping the LARQ header and a FCS in the frame; and a third logic block for recalculating the FCS for the stripped frame and for adding the recalculated FCS to the stripped frame" as recited in claim 5.

Appellant respectfully asserts that Hinchey and Mallory, taken singly or in combination, do not teach or suggest "a first logic block for detecting a LARQ header in a frame; a second logic block for stripping the LARQ header and a FCS in the frame; and a third logic block for recalculating the FCS for the stripped frame and for adding the recalculated FCS to the stripped frame" as recited in claim 5. The Examiner cites column 1, line 66 – column 2, line 21 and column 5, lines 1-28 of Hinchey as teaching a first logic block for detecting a header in a frame; a second logic block for stripping the header and a FCS in the frame; and a third logic block for recalculating the FCS for the stripped frame and for adding the recalculated FCS to the stripped frame. Paper No. 12, page 11. The Examiner further states that both a "logic block" and a "network controller" are broad terms and read on any mechanism to implement the desired step or any

mechanism that sends and receives information on the network. Paper No. 12, pages 10-11.

Appellant respectfully traverses. Hinchey teaches removing the access control and frame control fields. Column 2, lines 7-8. However, there is no language in the cited passages of removing a header. Hence, Hinchey does not teach removing a header in a frame as asserted by the Examiner. Instead, Hinchey teaches removing particular information in the header. Column 2, lines 2-8. Therefore, the Examiner has not presented a *prima facie* case of obviousness, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

- G. Response to Examiner's argument, as discussed on pages 11-12 of Paper No. 12, that Hinchey and Mallory teach "wherein an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame" as recited in claim 6.

Appellant respectfully asserts that Hinchey and Mallory, taken singly or in combination, do not teach or suggest "wherein an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame " as recited in claim 6. The Examiner asserts that it is inherent that the combination of Hinchey and Mallory to teach an asserted first signal to the first logic block to indicate that the LARQ header is enabled and must be stripped from the frame. Paper No. 12, pages 11-12. Appellant respectfully traverses. There is no language in either Hinchey or Mallory, taken singly or in combination, to suggest asserting a signal to indicate that a LARQ header is enabled. Neither is there any language in either Hinchey or Mallory, taken singly or in combination, to suggest asserting a signal to indicate to strip the LARQ header. The Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). The Examiner must provide extrinsic evidence that must make clear that Hinchey in view of Mallory teach asserting a signal to a logic block that indicates that the LARQ header is enabled and must be stripped from the frame, and that

it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). However, the Examiner has not supported his assertion that Hinchey in view of Mallory teach asserting a signal to a logic block that indicates that the LARQ header is enabled. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 6. M.P.E.P. §2143.

- H. Response to Examiner's argument, as discussed on pages 11-12 of Paper No. 12, that Hinchey and Mallory teach "wherein the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that the LARQ header is to be stripped from the frame" as recited in claim 7.

Appellant respectfully asserts that Hinchey and Mallory, taken singly or in combination, do not teach or suggest "wherein the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that the LARQ header is to be stripped from the frame" as recited in claim 7. The Examiner asserts that it is inherent that the combination of Hinchey and Mallory to teach the above cited-claim limitation. Paper No. 12, page 12. The Examiner further states:

Mallory discloses that the presence of FCS is optional (col. 6, lines 9-20) such that the use of two signals, one for stripping the LARQ header and one for stripping the FCS, allows for stripping the LARQ header when an FCS is not present. Paper No. 12, page 12.

Appellant respectfully traverses. There is no language in either Hinchey or Mallory, taken singly or in combination, to suggest asserting a signal to indicate that the FCS is to be stripped. Neither is there any language in either Hinchey or Mallory, to suggest asserting a signal to indicate that the LARQ header is to be stripped. The Examiner has not presented any objective evidence for concluding that the teaching that the presence of FCS is optional necessarily concludes the teaching of asserting a signal to indicate that the FCS is to be stripped or necessarily concludes the teaching of asserting a signal to indicate that the LARQ header is to be stripped. The Examiner is merely relying upon

his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). The Examiner must provide extrinsic evidence that must make clear that Hinchey in view of Mallory teach asserting a signal to indicate that the FCS is to be stripped and asserting a signal to indicate that the LARQ header is to be stripped, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). However, the Examiner has not supported his assertion that Hinchey in view of Mallory teach asserting a signal to indicate that the FCS is to be stripped and asserting a signal to indicate that the LARQ header is to be stripped. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 7. M.P.E.P. §2143.

- I. Response to Examiner's argument, as discussed on page 13 of Paper No. 12, that Hinchey and Mallory teach "wherein an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame" as recited in claim 6.

Appellant respectfully asserts that Hinchey and Mallory, taken singly or in combination, do not teach or suggest "wherein an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame" as recited in claim 6. The Examiner asserts that it is inherent that the combination of Hinchey and Mallory to teach an asserted first signal to the first logic block to indicate that the LARQ header is enabled and must be stripped from the frame. Paper No. 12, pages 11-12. Appellant respectfully traverses. There is no language in either Hinchey or Mallory, taken singly or in combination, to suggest asserting a signal to indicate that a LARQ header is enabled. Neither is there any language in either Hinchey or Mallory, taken singly or in combination, to suggest asserting a signal to indicate to strip the LARQ header. The Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). The Examiner must provide extrinsic evidence that must make clear that Hinchey in view of Mallory teach asserting a signal to a logic block that indicates that the LARQ header is enabled and must be stripped from the frame, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743,

745 (Fed. Cir. 1999). However, the Examiner has not supported his assertion that Hinchey in view of Mallory teach asserting a signal to a logic block that indicates that the LARQ header is enabled. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 6. M.P.E.P. §2143.

- J. Response to Examiner's argument, as discussed on pages 13-14 of Paper No. 12, that the Examiner did present objective evidence for combining Hinchey, Mallory and Gibson.

The Examiner asserts that the Appellant is merely arguing that the Examiner cannot find the motivation to combine Hinchey, Mallory and Gibson from the reference Gibson. Appellant is not asserting that the motivation to combine Hinchey, Mallory and Gibson cannot be found in Gibson. Instead, Appellant is asserting that the Examiner's motivation is a motivation to solve Gibson's problem (remotely wake-up a device in the low power mode and to transmit and process information quickly and accurately which is transmitted through the LAN as discussed on page 2, line 23 – page 3, line 2 of Gibson). The Examiner's motivation ("to save energy" and "conserve power") is a motivation to solve Gibson's problem. The Examiner's motivation is not a motivation to combine the references Hinchey, Mallory and Gibson. Therefore, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 4 and 9-12 since the Examiner has not presented objective evidence for combining Hinchey with Mallory and Gibson. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

- K. Response to Examiner's argument, as discussed on pages 14-15 of Paper No. 12, that the Examiner has presented motivation to combine Hinchey, Mallory and Gibson to perform the steps of claims 4 and 9-12 in order to convert a LARQ Ethernet frame into a conventional Ethernet frame where the frame contains a wake pattern used to wake up devices that have entered sleep mode.

The Examiner states that Gibson teaches transmitting wake patterns, using Ethernet frames, to devices in sleep mode in order for the device to wake up. Paper No. 12, page 15. The Examiner further states that it would have been obvious to one of ordinary skill to perform the steps of claims 4 and 9-12 in order convert a LARQ

Ethernet frame into a conventional Ethernet frame where the frame contains a wake pattern used to wake up devices that have entered sleep mode. Paper No. 12, page 15.

Appellant respectfully asserts that there is no language in claims 4 and 9-12 that states converting a LARQ Ethernet frame into a conventional Ethernet frame. Neither is there any language in claims 4 and 9-12 that states a frame containing a wake pattern used to wake up devices that have entered sleep mode. Further, there is no language in Hinchey that would suggest performing such a conversion. Neither is there any language in Hinchey that would suggest having a frame containing a wake pattern used to wake up devices that have entered sleep mode. Appellant respectfully asserts that the Examiner has not supplied any motivation to combine Hinchey, Mallory and Gibson but instead recounts the different teachings of Mallory and Gibson. The Examiner is merely relying upon his own subjective opinion for combining Hinchey with Mallory and Gibson which is insufficient to support a *prima facie* case of obviousness. Consequently the Examiner has not provided a *prima facie* case of obviousness for rejecting claims 4 and 9-12. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

- L. Response to Examiner's argument, as discussed on pages 16-17 of Paper No. 12, that Hinchey, Mallory and Gibson teach "a home phone line network controller, wherein the home phone line network controller comprises: a first logic block for detecting a LARQ header in a frame; a second logic block for stripping the LARQ header and a FCS in the frame; and a third logic block for recalculating the FCS for the stripped frame and for adding the recalculated FCS to the stripped frame" as recited in claim 9.

Appellant respectfully traverses the Examiner's assertion that Hinchey, Mallory and Gibson teach "a home phone line network controller, wherein the home phone line network controller comprises: a first logic block for detecting a LARQ header in a frame; a second logic block for stripping the LARQ header and a FCS in the frame; and a third logic block for recalculating the FCS for the stripped frame and for adding the recalculated FCS to the stripped frame" as recited in claim 9 for at least the reasons stated in Section F herein.

- M. Response to Examiner's argument, as discussed on page 17 of Paper No. 12, that Hinchey, Mallory and Gibson teach "wherein an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame" as recited in claim 10.

Appellant respectfully traverses the Examiner's assertion that Hinchey, Mallory and Gibson teach "wherein an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame" as recited in claim 10 for at least the reasons stated in Section G herein.

- N. Response to Examiner's argument, as discussed on pages 17-18 of Paper No. 12, that Hinchey, Mallory and Gibson teach "wherein the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that the LARQ header is to be stripped from the frame" as recited in claim 11.

Appellant respectfully traverses the Examiner's assertion that Hinchey, Mallory and Gibson teach "wherein the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that the LARQ header is to be stripped from the frame" as recited in claim 11 for at least the reasons stated in Section H herein.

- O. Other matters raised by the Examiner.

All other matters raised by the Examiner, e.g., argument on page 15 of Examiner's Answer, have been adequately addressed above and in Appellant's Appeal Brief and therefore will not be addressed herein for the sake of brevity.

II. CONCLUSION

For the reasons stated in Appellant's Appeal Brief and noted above, Appellant respectfully asserts that the rejections of claims 1 and 3-12 are in error. Appellant respectfully requests reversal of the rejections and allowance of claims 1-12.

Respectfully submitted,

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